

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number
WO 2005/000740 A2

(51) International Patent Classification⁷: C01B 33/00

(21) International Application Number:
PCT/BE2004/000094

(22) International Filing Date: 28 June 2004 (28.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0315012.5 27 June 2003 (27.06.2003) GB

(71) Applicant (*for all designated States except US*): K.U.
LEUVEN RESEARCH & DEVELOPMENT [BE/BE];
Groot Begijnhof, Benedenstraat 58, B-3000 Leuven (BE).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): MARTENS, Johan,
Adriaan [BE/BE]; Borheidestraat 25, B-2040 Hulden-
berg (BE). KIRSCHHOCK, Christine, Eva, Antonia

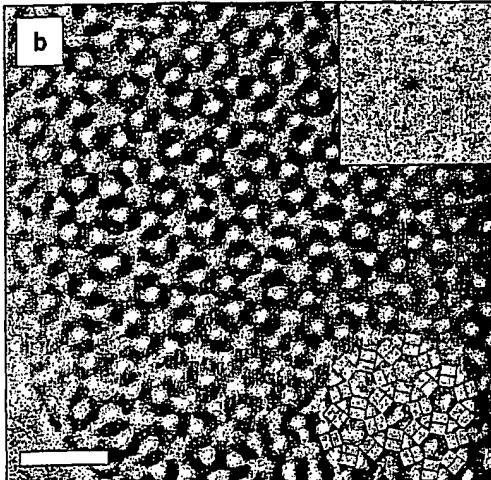
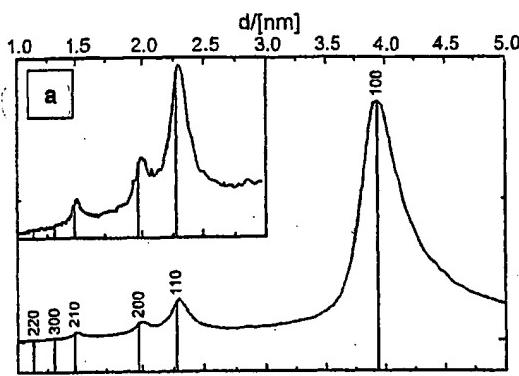
[DE/DE]; In der Kirchtanne 31, D-64297 Darmstadt
(DE). KREMER, Sébastien, Philippe, Brigitte [BE/BE];
Notelaarstraat 144, B-1030 Schaerbeek (BE). AERTS,
Alexander, Jan, Maria, Herman, Eugène [BE/BE];
Consciencestraat 45 bus 6, B-2018 Antwerpen (BE). VAN
DEN MOOTER, Guy [BE/BE]; Lostraat 69, B-3212
Pellenberg (BE). VAN HUMBEECK, Jan [BE/BE];
Elzenbroekstraat 20, B-3053 Haasrode (BE).

(74) Agents: BIRD, William, E. et al.; Bird Goen & Co, Klein
Delenstraat 42 A, B-3020 Winksele (BE).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
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MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: CRYSTALLINE MESOPOROUS OXIDE BASED MATERIALS USEFUL FOR THE FIXATION AND CONTROLLED RELEASE OF DRUGS



(57) Abstract: The invention describes a new class of crystalline silica material having two levels of porosity and structural order. At the first level, building units are nanoslabs of uniform size having zeolite framework. At the second structural level, nanoslabs are assembled, e.g. linked through their corners, edges or faces following patterns imposed by interaction with cationic surfactant or triblock copolymer molecules. After evacuation of these molecules, microporosity is obtained inside the nanoslabs, and a precise mesoporosity between the nanoslabs depending on the tiling pattern of the zeolite nanoslabs, as evidenced by X-ray diffraction. These materials are useful for the fixation of biologically active species, such as poorly soluble drugs.



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

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Published:

— *without international search report and to be republished upon receipt of that report*

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